

P.R. 4-3 – Joint Claim Construction and Prehearing Statement
Appendix 1 – Parties’ Proposed Constructions for Disputed Claim Terms

I. U.S. Patent No. 7,933,431

No.	Claim Term	Plaintiff’s Construction and Evidence	Defendants’ Construction and Evidence
1	“means for controlling a function of said apparatus using said information” (Claim 7)	<p>This term is governed by 35 U.S.C. § 112 ¶ 6</p> <p>Structure: a control system associated with a camera¹</p> <p>Function: “controlling a function of said apparatus using said information”</p> <p><u>Intrinsic Evidence:</u> Abstract; 2:7-13; 2:20-23; 3:15-33; 4:56-62; 5:50-60; 6:-19; 6:27-32; 7: 22-29; 7:55-76; 12:42-64; 13:8-15; 14:45-51; 16:-7; 17:34-50; 19:16-34; 23:66-24:7; 24:35-50</p> <p><u>Extrinsic Evidence:</u> See Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff’s</p>	<p>Means-plus-function</p> <p>Function: “controlling a function of said [handheld computer] apparatus using said information [concerning a position or movement of said object positioned by a user operating said object]”</p> <p>The dependent claims currently asserted by Plaintiff further add to the function, including: (1) wherein said object is a finger (Claim 8)</p> <p>Structure: Indefinite</p> <p>Intrinsic Evidence '431 Patent, FIG. 8; 11:53-13:44; Claims 7-8</p> <p>Extrinsic Evidence Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term</p>

¹ Defendants object to the untimely change in GTP’s proposed structure for the “means for controlling” term, on the day of the P.R. 4-3 deadline and three weeks after the P.R. 4-2 deadline. GTP previously proposed that the structure for the “means for controlling” term was “a computer with at least one microprocessor specially programmed for controlling said apparatus using said information.” GTP did not raise the issue previously in any manner, and notably said nothing about it in the parties’ meet and confer the day before the P.R. 4.3 deadline. Defendants reserve the right to amend their construction and supporting evidence, including expert testimony, accordingly.

Plaintiff’s Response: Plaintiff modified their proposed constructions to better reflect the intrinsic record after further review of that record. Claim construction is an iterative process that is designed to arrive at the proper construction for a term and is designed for the parties to refine the constructions after fair consideration of the intrinsic record, appropriate extrinsic evidence and the opposing parties positions. Plaintiff has done just that.

		<p>Opening Claim Construction Brief served on July 16, 2021²</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '431 Patent, in view of the claim language, the drawings, the written description, the specification of the '431 Patent as a whole, the file history of the '431 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.</p>
2	"computer means within said housing for analyzing said image to determine information concerning a	<p>No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6.</p> <p>Alternatively, if the Court finds this term is subject to 35 U.S.C. § 112 ¶ 6:</p>	<p>Means-plus-function</p> <p>Function: "analyzing said image to determine information concerning a position or movement of said object [positioned by a user operating said object]"</p>

² Defendants object to GTP's untimely identification of expert testimony across all claim terms. GTP failed to identify any expert or expert testimony—or any extrinsic evidence for that matter—for any claim term in its P.R. 4-2 disclosures as required by P.R. 4-2(b). GTP is identifying its expert, Benedict Occhiogrosso, for the first time on the day of the P.R. 4-3 deadline.

Plaintiff's Response: Defendants' complaint about Plaintiff's failure to comply with the Local Rules is equally applicable to Defendants. While Defendants identified an expert, Defendants did not identify or give a brief description of the Defendants' Experts testimony for each claim limitation. Instead, Defendants' recited the identical paragraph for each claim limitation reciting only that the expert will rely upon non-specific citations to the intrinsic record, their expertise, and the prosecution history. Plaintiff reproduces the excerpt in its entirety below. Given Defendants' generic, non-specific recitation of their expert's purported testimony, relying on the universe of generic evidence that the expert may rely on, Defendants were equally non-compliant especially given their numerous indefiniteness challenges. For many of the claim terms, Plaintiff had no forewarning that Defendants would assert that the terms were controlled by 112 para 6, were indefinite for undisclosed grounds, or otherwise would be challenged as not disclosing definite structure. It was only after the 4.2 disclosures that Plaintiff became fully aware of Defendants tactics. Plaintiff has now identified an expert that has provided rebuttal testimony from which Defendants may conduct appropriate claim construction discovery if they choose. Defendants have suffered no prejudice that is not of their own making.

"Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '431 Patent, in view of the claim language, the drawings, the written description, the specification of the '431 Patent as a whole, the file history of the '431 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses."

	<p>position or movement of said object”</p> <p>(Claim 7)</p>	<p>Structure: A computer with at least one microprocessor specially programmed programed to determine information concerning a position or movement of said object.</p> <p>Function: “analyzing said image to determine information concerning a position or movement of an object”</p> <p><u>Intrinsic Evidence:</u></p> <p>Abstract; 2:7-13; 2:20-23; 3:15-33; 4:48-62; 6:2-19; 6:27-32; 6:64-7:14; 7:22-29; 7:55-76; 8:25-38; 8:60-9:14; 11:55-58; 12:42-64; 13:8-15; 14:45-51; 16:1-7; 17:34-50; 19:16-34; 23:66-24:7; 24:35-50</p> <p>FIGS. 1A</p> <p><u>Extrinsic Evidence:</u></p> <p><i>See Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff’s Opening Claim Construction Brief served on July 16, 2021</i></p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>The dependent claims currently asserted by Plaintiff further add to the function, including:</p> <p>(1) wherein said object is a finger (Claim 8)</p> <p>Structure: “A computer programmed to (1) scan the pixel elements in a matrix array on which said image is formed, and then calculate the centroid location “x,y” of a target on the object using the moment method disclosed in U.S. Patent No. 4,219,847 to Pinkney, as disclosed at 4:48-62; (2) add or subtract said image from prior images and identify movement blur, as disclosed at 6:64-7:14, 7:22-29; (3) obtain a time variant intensity change in said image from the detected output voltage from the signal conditioning of the camera means or by subtracting images and observing the difference due to such variation, as disclosed at 8:25-38; or (4) detect a change in color reflected from a diffractive, refractive, or interference based element on said object that reflects different colors during movement, as disclosed at 8:60-9:14.”</p> <p>Intrinsic Evidence</p> <p>’431 Patent, FIG. 8; 3:63-4:4, 4:9-28, 6:64-7:29, 8:4-38, 8:60-9:14; Claims 7-8</p> <p>U.S. Patent App. No. 10/893,534 Prosecution History, including Jan. 24, 2008 Final Rejection at 2 and Apr. 24, 2008 Notice of Appeal at 2</p> <p>Extrinsic Evidence</p> <p>Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the ’431 Patent, in view of the claim language, the drawings, the written description, the specification of the ’431 Patent as a whole, the file history of the ’431 Patent,</p>
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			and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.
3	"display function which is controlled" (Claim 9)	No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6. <u>Intrinsic Evidence:</u> 5:50-60; 13:46-14:14; FIGS. 9, 10A, 10B <u>Extrinsic Evidence:</u> See Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff's Opening Claim Construction Brief served on July 16, 2021 Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	Means-plus-function Function: "controlling a display function" Structure: "a computer programmed to (1) move a slider on the display as disclosed at 13:54-67, (2) turn a knob on the display as disclosed at 13:63-14:9, or (3) throw a switch on the display as disclosed at 13:63-13:67" Intrinsic Evidence '431 Patent at FIG. 9, 13:54-67; Claim 9 Extrinsic Evidence Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '431 Patent, in view of the claim language, the drawings, the written description, the specification of the '431 Patent as a whole, the file history of the '431 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.
4	"sensing means associated with said device" (Claim 1)	No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6. Alternatively, if the Court finds this term is subject to 35 U.S.C. § 112 ¶ 6: Structure: Electro-optical sensor.	Means-plus-function Function: "electro-optically sensing light reflected from said at least one finger" Structure: "a camera"

		<p>Function: “electro-optically sensing light reflected from at least one finger”</p> <p><u>Intrinsic Evidence:</u> Abstract, 3:15-22; 3:44-52; 4:42-47; 8:14-24; 9:16-28; 10:64-11:6; 11:54-58; 14:30-32; 14:52-59; 15:3-17; 17:4-16; 17:34-43; 18:6-8; 18:20-24; 19:3-8; 20:23-25; 20:45-49; 21:21-26; 22:9-12; 23:58-65; 25:22-35</p> <p>FIGS. 1A, 1B, 1C, 2A, 5, 10, 11A, 11B, 13, 17A, 17B</p> <p><u>Extrinsic Evidence:</u> <i>See</i> Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff’s Opening Claim Construction Brief served on July 16, 2021</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>Intrinsic Evidence '431 Patent at FIGS. 1A, 3A, 3C, 10A; 3:44-52, 7:22-25, 8:4-8, 16:10-15; Claim 1</p> <p>Extrinsic Evidence Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '431 Patent, in view of the claim language, the drawings, the written description, the specification of the '431 Patent as a whole, the file history of the '431 Patent, and the extrinsic evidence, and to respond to Plaintiff’s claim construction positions and any testimony of Plaintiff’s expert witnesses.</p>
5	“means for transmitting information” (Claim 11)	<p>This term is governed by 35 U.S.C. § 112 ¶ 6.</p> <p>Structure: A transmitter.</p> <p>Function: “transmitting information”</p> <p><u>Intrinsic Evidence:</u> 3:15-22; 11:62-64; 12:65-13:7</p> <p>FIG. 8A</p>	<p>Means-plus-function</p> <p>Function: “transmitting information”</p> <p>Structure: “cellular transceiver”</p> <p>Intrinsic Evidence '431 Patent at 12:65-13:3; Claim 11</p> <p>Extrinsic Evidence Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term</p>

		<p><u>Extrinsic Evidence:</u> See Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff's Opening Claim Construction Brief served on July 16, 2021</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '431 Patent, in view of the claim language, the drawings, the written description, the specification of the '431 Patent as a whole, the file history of the '431 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.</p>
6	<p>"a light source for illuminating said object"</p> <p>(Claim 12)</p>	<p>No construction necessary.</p> <p><u>Intrinsic Evidence:</u> 3:30-37; 7:1-4; 7:66-8:3; 8:47-54; 9:1-6; 10-19-22</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>"a light source designed to transmit light directly onto said object"</p> <p><u>Intrinsic Evidence</u> '431 Patent at FIG. 1A, 3C, 4B; 3:23-43, 8:4-14, 9:1-8; Claim 12</p> <p><u>Extrinsic Evidence</u> U.S. Patent No. 8,405,604, including 53:47-54</p> <p>U.S. Patent App. No. 11/349,350 Prosecution History, including May 12, 2010 Pre-Appeal Brief Request for Review at 1-2</p> <p>'079 Patent and its file history</p>
7	<p>"wherein said movement is sensed in 3 dimensions"</p> <p>(Claim 4)</p>	<p>No construction necessary.</p> <p><u>Intrinsic Evidence:</u> 3:15-19; 3:53-60; 4:29-32; 7:22-29; 19:16-43; 23:58-65; 24:44-50</p> <p>FIG. 12</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>"wherein said movement is determined with respect to three perpendicular axes"</p> <p><u>Intrinsic Evidence</u> '431 Patent at FIG. 1B, 3:53-60; Claim 4</p> <p><u>Extrinsic Evidence</u> The IEEE Standard Dictionary of Electrical and Electronics Terms (Sixth Edition, 1997), including at 1108</p> <p>McGraw-Hill Dictionary of Scientific and Technical Terms (Fifth Edition, 1994), including at 2025</p>

			'079 Patent and its file history '949 Patent and its file history
8	"wherein said information is obtained in 3 dimensions" (Claim 19)	No construction necessary. <u>Intrinsic Evidence:</u> 3:53-60; 4:29-33; 22:25-30; 23:53-57; 24:44-58; 25:32-35 Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	"wherein said information is obtained with respect to three perpendicular axes" <u>Intrinsic Evidence</u> '431 Patent at FIG. 1B, 3:53-60; Claim 19 <u>Extrinsic Evidence</u> The IEEE Standard Dictionary of Electrical and Electronics Terms (Sixth Edition, 1997), including at 1108 McGraw-Hill Dictionary of Scientific and Technical Terms (Fifth Edition, 1994), including at 2025
9	"electro-optically sensing" (Claim 1)	No construction necessary. <u>Intrinsic Evidence:</u> Abstract, 3:15-19; 3:44-52; 4:42-47; 9:16-28; 11:54-58; 14:30-32; 14:52-59; 15:3-17; 17:4-16; 17:34-43; 18:6-8; 18:20-24; 19:3-8; 20:23-25; 20:45-49; 21:21-26; 22:9-12; 23-58-65; 25:22-35 FIGS. 1A, 1B, 1C, 2A, 5, 10, 11A, 11B, 13, 17A, 17B Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	"sensing [light reflected from said at least one finger] by measuring changes to an electric field" <u>Intrinsic Evidence</u> '431 Patent at FIG. 17A; 3:15-22, 11:54-58, 17:4-14, 23:58-65; Claim 1 <u>Extrinsic Evidence</u> The IEEE Standard Dictionary of Electrical and Electronics Terms (Sixth Edition, 1997), including at 349 McGraw-Hill Dictionary of Scientific and Technical Terms (Fifth Edition, 1994) , including at 665-66
10	"electro-optical sensing" (Claim 2)	No construction necessary. <u>Intrinsic Evidence:</u>	"sensing light reflected from said at least one finger by measuring changes to an electric field" <u>Intrinsic Evidence</u>

	<p>Abstract, 3:15-19; 3:44-52; 4:42-47; 9:16-28; 11:54-58; 14:30-32; 14:52-59; 15:3-17; 17:4-16; 17:34-43; 18:6-8; 18:20-24; 19:3-8; 20:23-25; 20:45-49; 21:21-26; 22:9-12; 23:58-65; 25:22-35</p> <p>FIGS. 1A, 1B, 1C, 2A, 5, 10, 11A, 11B, 13, 17A, 17B</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>'431 Patent at FIG. 17A; 3:15-22, 11:54-58, 17:4-14, 23:58-65; Claim 2</p> <p>Extrinsic Evidence The IEEE Standard Dictionary of Electrical and Electronics Terms (Sixth Edition, 1997), including at 349</p> <p>McGraw-Hill Dictionary of Scientific and Technical Terms (Fifth Edition, 1994) , including at 665-66</p>
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II. U.S. Patent No. 8,194,924

No.	Claim Term	Plaintiff's Construction and Evidence	Defendants' Construction and Evidence
1	“oriented to view” (Claim 1)	<p>No construction necessary.</p> <p>Intrinsic Evidence: 3:53-60; 9:26-30; 15:6-19; 10:38-62; 25:40-63</p> <p>FIGS. 1A, 1B, 18</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>“having a field of view encompassing”</p> <p>Intrinsic Evidence '924 Patent at FIG. 18; 25:40-26:40; Claim 1</p> <p>U.S. Patent App. No. 13/714,755, including Claims 1, 7, 14</p> <p>Extrinsic Evidence Merriam-Webster's Collegiate Dictionary (Tenth Edition, 1995), including at 820</p> <p>The Concise Oxford Dictionary of Current English (Ninth Edition, 1995), including at 961-62</p>
2	“oriented to view a user” (Claim 1)	<p>No construction necessary.</p> <p>Intrinsic Evidence: 3:53-60; 9:26-30; 15:6-19; 10:38-62; 25:40-63</p> <p>FIGS. 1A, 1B, 18</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>Indefinite under <i>IPXL Holdings, LLC v. Amazon.com, Inc.</i>, 430 F.3d 1377 (Fed. Cir. 2005).</p> <p>Intrinsic Evidence '924 Patent at FIG. 18; 25:40-26:40; Claim 1</p> <p>U.S. Patent App. No. 13/714,755, including Claims 1, 7, 14</p>
3	“oriented to view an object other than the user” (Claim 1)	<p>No construction necessary.</p> <p>Intrinsic Evidence: 3:53-60; 9:26-30; 15:6-19; 10:38-62; 25:40-63</p>	<p>Indefinite under <i>IPXL Holdings, LLC v. Amazon.com, Inc.</i>, 430 F.3d 1377 (Fed. Cir. 2005).</p> <p>Intrinsic Evidence '924 Patent at FIG. 18; 25:40-26:40; Claim 1</p>

		<p>FIGS. 1A, 1B, 18</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	U.S. Patent App. No. 13/714,755, including Claims 1, 7, 14
4	<p>“wherein the gesture is performed by a person other than the user of the handheld device”</p> <p>(Claim 9)</p>	<p>No construction necessary.</p> <p><u>Intrinsic Evidence:</u> 4:33-40; 6:58-7:29; 20:5-16; 22:9-12; 19:41-63; 20:5-32</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>Indefinite under <i>IPXL Holdings, LLC v. Amazon.com, Inc.</i>, 430 F.3d 1377 (Fed. Cir. 2005).</p> <p><u>Intrinsic Evidence</u> ‘924 Patent at 20:5-10, 22:9-12, 22:39-60, 25:40-63, 26:25-27; Claims 6, 9</p>
5	<p>“a computer within the housing . . . wherein the computer is adapted to perform a control function of the handheld device based on at least one of the first camera output and the second camera output”</p> <p>(Claims 1, 6-8, 10, 12, 14)</p>	<p>No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6.</p> <p><u>Intrinsic Evidence:</u> Abstract; 2:7-13; 2:20-23; 3:19-36; 11:65-12:11; 13:57-17; 14:33-62; 15:6-17:22; Claim 1.</p> <p>FIGS. 18</p> <p><u>Extrinsic Evidence:</u> <i>See</i> Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff’s Opening Claim Construction Brief served on July 16, 2021</p>	<p>Means-plus-function</p> <p><u>Function:</u> “perform a control function of the handheld device based on at least one of the first camera output and the second camera output”</p> <p>The dependent claims currently asserted by Plaintiff add additional functions, including:</p> <ul style="list-style-type: none"> (1) “determine a gesture based on at least one of the first camera output and the second camera output” (Claim 6); (2) “determine a facial expression based on at least one of the first camera output and the second camera output” (Claim 7); (3) “determine at least one of the position and the orientation of the object based on the second camera output” (Claim 8); (4) “recognize the object based on the second camera output” (Claim 10); (5) “determine a reference frame of the object” (Claim 12) (6) “transmit information over an internet connection” (Claim 14)

		<p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>Structure: Indefinite</p> <p>Intrinsic Evidence '924 Patent at FIG. 18; 25:16-24, 25:40-49, 25:64-26:5, 26:32-43; Claims 1, 6-8, 10-14</p> <p>'924 Patent Prosecution History, including Dec. 14, 2011 Applicant Arguments/Remarks Made in Amendment at 7</p> <p>U.S. Patent App. No. 10/893,534, including Jan. 24, 2008 Final Rejection at 2 and Apr. 24, 2008, Notice of Appeal at 2</p> <p>Extrinsic Evidence Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '924 Patent, in view of the claim language, the drawings, the written description, the specification of the '924 Patent as a whole, the file history of the '924 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.</p>
6	"gesture" (Claims 6, 9)	<p>No construction necessary.</p> <p>Intrinsic Evidence: 4:33-40; 6:58-7:29; 20:5-16; 22:9-12; 19:41-63</p> <p>FIGS. 3A, 12</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>"a sequence of positions that conveys a meaning"</p> <p>Intrinsic Evidence '924 Patent at 20:5-10, 22:9-12, 22:39-60, 25:40-63, 26:25-27; Claims 6-7, 9</p> <p>Extrinsic Evidence The Concise Oxford Dictionary of Current English (Ninth Edition, 1995), including at 568</p> <p>Merriam-Webster's Collegiate Dictionary (Tenth Edition, 1995), including at 489</p>

			'079 Patent and its file history '949 Patent and its file history
7	"adapted to" (Claims 1, 3-5, 8, 10, 12, 14)	No construction necessary. <u>Intrinsic Evidence:</u> Abstract; 2:7-13; 2:20-23; 3:19-57; 4:33- 53; 11:57-12:11; 12:62-13:28; 13:57-17; 14:33-62; 15:6-17:22; 26-25-27 FIGS. 8A, 8B, 18 Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	computer: "programmed to" first and second cameras: "designed to" <u>Intrinsic Evidence</u> '924 Patent at FIG. 18; 25:16-24, 25:40-49, 25:64-26:5, 26:32-43; Claims 1, 3-8, 10-14 '924 Patent Prosecution History, including Dec. 14, 2011 Applicant Arguments/Remarks Made in Amendment at 7 U.S. Patent App. No. 10/893,534, including Jan. 24, 2008 Final Rejection at 2 and Apr. 24, 2008, Notice of Appeal at 2

III. U.S. Patent No. 8,553,079

No.	Claim Term	Plaintiff's Construction and Evidence	Defendants' Construction and Evidence
1	“gesture” (Claims 1, 4-5, 11, 18-21, 24-25)	No construction necessary. <u>Intrinsic Evidence:</u> Abstract; 2:54-64; 3:48-55; 5:23-28; 5:63-65; 9:63-10:49; 11:49-58 Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	“a sequence of positions that conveys a meaning” <u>Intrinsic Evidence</u> '079 Patent at 2:54-64, 3:48-51, 5:23-39, 5:63-65, 9:49-62; Claims 5, 18-20, 25 <u>Extrinsic Evidence</u> The Concise Oxford Dictionary of Current English (Ninth Edition, 1995), including at 568 Merriam-Webster's Collegiate Dictionary (Tenth Edition, 1995), including at 489 '924 Patent and its file history '949 Patent and its file history
2	“light source adapted to direct illumination through a work volume above the light source” “light source adapted to illuminate a human body part within a work volume”	No construction necessary. <u>Intrinsic Evidence:</u> Abstract; 1:54-2:6; 2:39-48; 2:65-3:8; 4:4-28; 4:41-50; 9:25-48; 10-30-40; FIGS. 1, 2, 6 Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	“a light source designed to transmit light directly through a work volume above the component” “a light source designed to transmit light directly onto a human body part within a work volume generally above the component” “a light source in fixed relation relative to the camera and designed to transmit light directly through the work volume” <u>Intrinsic Evidence</u> '079 patent at FIGS. 1-3; 2:49-58, 3:1-3, 4:4-24, 4:61-64; Claims 1-3, 9-12, 14-15, 21-23, 30

	<p>generally above the light source”</p> <p>“light source in fixed relation relative to the camera and adapted to direct illumination through the work volume”</p> <p>(Claims 1-3, 9-11, 14-15, 21-23, 30)</p>	<p>Extrinsic Evidence</p> <p>U.S. Patent No. 8,405,604, including 53:47-54</p> <p>U.S. Patent App. No. 11/349,350 Prosecution History, including May 12, 2010 Pre-Appeal Brief Request for Review at 1-2</p> <p>'431 Patent and its file history</p>	
3	<p>“a processor adapted to determine the gesture performed in the work volume and illuminated by the light source based on the camera output”</p> <p>(Claim 11)</p>	<p>No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6.</p> <p>Intrinsic Evidence: 1:54-2:3; 2:39-48; 4:4-14; 8:9-21; 9:26-56; Claim 11 FIGS. 2, 6,</p> <p>Extrinsic Evidence: <i>See Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff's Opening Claim Construction Brief served on July 16, 2021</i></p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>Means-plus-function</p> <p>Function: “determine the gesture performed in the work volume and illuminated by the light source based on the camera output”</p> <p>The dependent claims currently asserted by Plaintiff further add to the function, including: (1) determining a pointing gesture (Claim 19)</p> <p>Structure: Indefinite</p> <p>Intrinsic Evidence '079 Patent at 2:58-61; 3:48-51, Claims 11, 18-20</p> <p>Extrinsic Evidence Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '079 Patent, in view of the claim language, the drawings, the written description, the specification of the '079 Patent as a whole, the file history of the '079 Patent, and the extrinsic</p>

			evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.
4	"the first and second cameras" (Claim 26)	No construction necessary. <u>Intrinsic Evidence:</u> 2:65-3:3; 3:48-61; 4:29-34; 4:39-54; 4:65-5:13; 7:13-17; 9:63-65; 10:26-41 FIGS. 2, 5, 6 Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	Indefinite for lack of antecedent basis <u>Intrinsic Evidence</u> '079 Patent at Claims 21, 26
5	"adapted to" (Claims 1, 11, 21)	No construction necessary. <u>Intrinsic Evidence:</u> Abstract; 1:54-2:6; 2:39-48; 2:65-3:8; 4:4-28; 4:41-50; 8:9-21; 9:25-48; 10:30-40; FIGS. 1, 2, 6 Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	light source: "designed to" processor: "programmed to" <u>Intrinsic Evidence</u> '079 Patent at FIGS. 1-3; 2:49-61, 3:1-3, 3:48-51, 4:4-24, 4:61-64; Claims 1-3, 9-12, 14-15, 18-23, 30
6	"three-dimensional position" (Claims 8, 28)	No construction necessary. <u>Intrinsic Evidence:</u> 1:54-62; 5:14-21; 7:19-27; 11:59-67; 12:16-45; FIGS. 7A, 7B	"a position defined with respect to three perpendicular axes (xyz)" <u>Intrinsic Evidence</u> '079 Patent at 8:63-67; Claims 8, 28 <u>Extrinsic Evidence</u>

		<p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>The IEEE Standard Dictionary of Electrical and Electronics Terms (Sixth Edition, 1997), including at 1108</p> <p>McGraw-Hill Dictionary of Scientific and Technical Terms (Fifth Edition, 1994), including at 2025</p> <p>'949 Patent and its file history</p> <p>'431 Patent and its file history</p>
7	<p>"work volume above the light source"</p> <p>"work volume generally above the light source"</p> <p>"work volume above the camera"</p> <p>(Claims 1, 6-7, 11-12, 21)</p>	<p>No construction necessary.</p> <p><u>Intrinsic Evidence:</u> Abstract; 2:39-48; 3:4-8; 3:43-47 FIGS. 1</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>"volume of space above the light source visible to the camera within which gestures are performed"</p> <p>"volume of space generally above the light source visible to the camera within which gestures are performed"</p> <p>"volume of space above the camera visible to the camera within which gestures are performed"</p> <p><u>Intrinsic Evidence</u> '079 Patent at FIGS. 1-2; 2:39-48; 3:4-20; 3:56-61; 4:29-40; 5:14-21 U.S. Patent App. No. 09/433,297 Prosecution History, including Sept. 9, 2002 Applicant Arguments/Remarks Made in Amendment at 2-3</p> <p><u>Extrinsic Evidence</u> U.S. Patent No. 6,545,670, including FIG. 1, 3:46-51 U.S. Patent No. 8,405,604, including FIG. 1c, 9:41-67, 10:43-45, 57:64-67</p>

IV. U.S. Patent No. 8,878,949

No.	Claim Term	Plaintiff's Construction and Evidence	Defendants' Construction and Evidence
1	“gesture” (Claims 1-3, 8-10, 13-15)	<p>No construction necessary.</p> <p>Intrinsic Evidence: 5:30-49; 6:63-7:2; 8:6-9; 8:56-63; 11:17-24; 12-13:5; 13:65-14:5</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>“a sequence of positions that conveys a meaning”</p> <p>Intrinsic Evidence '949 Patent at 5:30-49, 6:6-22, 6:50-7:10, 8:5-9, 11:16-25, 12:64-13:5, 12:65-14:2</p> <p>'949 Patent Prosecution History, including May 14, 2014 Final Rejection at 2</p> <p>U.S. Patent App. No. 13/850,616 Prosecution History, including April 17, 2014 Applicant Arguments/Remarks Made in Amendment at Claims 21-23, 27-29</p> <p>Extrinsic Evidence The Concise Oxford Dictionary of Current English (Ninth Edition, 1995), including at 568</p> <p>Merriam-Webster's Collegiate Dictionary (Tenth Edition, 1995), including at 489</p> <p>See '924 Patent's intrinsic evidence for “gesture”</p> <p>See '079 Patent's intrinsic evidence for “gesture”</p>
2	“forward facing portion” (Claims 1, 8, 13)	<p>No construction necessary.</p> <p>Intrinsic Evidence: 1:44-46; 2:17-23; 2:39-43; 9:62-10:4;</p> <p>FIGS. 1, 2A-2D, 5, 6, 7,</p>	<p>Indefinite</p> <p>Intrinsic Evidence '949 Patent at FIGS. 1, 2A, 2C, 7; 3:29-38, 4:66-5:9, 13:13-24</p> <p>'949 Patent Prosecution History, including August 14, 2014 Applicant Arguments/Remarks Made in an Amendment at 8.</p>

		<p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>Extrinsic Evidence Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '949 Patent, in view of the claim language, the drawings, the written description, the specification of the '949 Patent as a whole, the file history of the '949 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.</p>
3	<p>"forward facing light source"</p> <p>(Claims 5, 16)</p>	<p>No construction necessary.</p> <p>Intrinsic Evidence: 3:37-38; 3:61-4:10; 5:27-29; 9:8-20; 12:15-17; 16:36-39</p> <p>FIGS. 1, 2A-2D, 5, 6, 7,</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>Indefinite</p> <p>Intrinsic Evidence '949 Patent at FIGS. 1, 2A, 2C, 7; 3:29-38, 4:66-5:9, 13:13-24 '949 Patent Prosecution History, including August 14, 2014 Applicant Arguments/Remarks Made in an Amendment at 8.</p> <p>Extrinsic Evidence Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '949 Patent, in view of the claim language, the drawings, the written description, the specification of the '949 Patent as a whole, the file history of the '949 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.</p>
4	<p>"the detected gesture is identified by the processing unit apart</p>	<p>No construction necessary.</p> <p>Intrinsic Evidence:</p>	<p>Indefinite, including for lack of antecedent basis</p> <p>Intrinsic Evidence</p>

	from a plurality of gestures” (Claim 13)	5:30-49; 6:6-19; 6:63-7:2; 8:6-9; 8:56-63; 9:23; 11:17-24; 12-13:5; 13:65-14:5 Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	'949 Patent at 5:30-49, 6:6-22, 6:50-7:10, 8:5-9, 11:16-25, 12:64-13:5, 12:65-14:2 '949 Patent Prosecution History, including May 14, 2014 Final Rejection at 2 <u>Extrinsic Evidence</u> Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '949 Patent, in view of the claim language, the drawings, the written description, the specification of the '949 Patent as a whole, the file history of the '949 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.
5	“the electro-optical sensor” “the electro-optical sensor field of view” (Claim 13)	No construction necessary. <u>Intrinsic Evidence:</u> Abstract; 1:50-62; 2:66-4:53; 4:66-5:44; 6:6-19; 6:23-49; 7:2-19; 7:23-38; 8:10-30; 8:64-16; 9:8-14; 9:62-67; 10:5-10; 10:27-30; 10:37-40; 10:45-55; 11:25-28; 11:49-61; 12:5-12; 12:28-13:5; 13:13-30; 13:54-64; 14:25-27; 16:23-39; Claim 13 FIGS. 1, 2A-2C, 3, 5, 6, 7, 8 Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	Indefinite for lack of antecedent basis <u>Intrinsic Evidence</u> '949 Patent at Claims 1, 8, 13
6	“a processing unit within the device	No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6	Means-plus-function

	<p>housing and operatively coupled to an output of the electro-optical sensor, wherein the processing unit is adapted to: determine a gesture has been performed in the electro-optical sensor output, and control the digital camera in response to the gesture performed in the electro-optical sensor field of view, wherein the gesture corresponds to an image capture command, and wherein the image capture command causes the digital camera to store an image to memory.”</p> <p>(Claim 1)</p>	<p>Intrinsic Evidence: Abstract; 1:4-11; 1:57-62; 2:66-3:11; 3:29-43; 3:53-60; 4:33-48; 5:24-29; 6:6-19; 6:63-7:19; 7:51-56; 7:64-8:24; 9:15-31; 10:5-21; 11:4-39; 11:49-67; 13:13-24; 13:65-14, Claim 1</p> <p>FIGS. 1, 2A-2D, 4, 6, 7, 8,</p> <p>Extrinsic Evidence: <i>See Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff's Opening Claim Construction Brief</i> served on July 16, 2021</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>Function: “determine a gesture has been performed in the electro-optical sensor output, and control the digital camera in response to the gesture performed in the electro-optical sensor field of view, wherein the gesture corresponds to an image capture command, and wherein the image capture command causes the digital camera to store an image to memory”</p> <p>The dependent claims currently asserted by Plaintiff further add to the function, including:</p> <p>(1) determining a gesture that includes a hand motion (Claim 2)</p> <p>Structure: Indefinite</p> <p>Intrinsic Evidence '949 Patent at FIG. 2B; 6:6-19; Claim 1</p> <p>'949 Patent Prosecution History, including August 14, 2014 Applicant Arguments/Remarks Made in an Amendment at 8.</p> <p>Extrinsic Evidence Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '949 Patent, in view of the claim language, the drawings, the written description, the specification of the '949 Patent as a whole, the file history of the '949 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.</p>
7	“processing unit” (Claim 8)	No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6 Intrinsic Evidence:	Means-plus-function Function: “determining a gesture has been performed in the electro-optical sensor field of view based on the electro-optical sensor output,

	<p>6:6-19; 9:23, Claim 8.</p> <p>FIGS. 4</p> <p><u>Extrinsic Evidence:</u> See Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff's Opening Claim Construction Brief served on July 16, 2021</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>wherein the determined gesture corresponds to an image capture command”</p> <p>The dependent claims currently asserted by Plaintiff further add to the function, including:</p> <p>(1) determining a gesture that includes a hand motion (Claim 9)</p> <p><u>Structure:</u> Indefinite</p> <p><u>Intrinsic Evidence</u> '949 Patent at FIG. 2B; 6:6-19; Claim 1</p> <p>'949 Patent Prosecution History, including August 14, 2014 Applicant Arguments/Remarks Made in an Amendment at 8.</p> <p><u>Extrinsic Evidence</u> Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '949 Patent, in view of the claim language, the drawings, the written description, the specification of the '949 Patent as a whole, the file history of the '949 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.</p>	
8	<p>“processing unit operatively coupled to the sensor and to the digital camera, wherein the processing unit is adapted to: detect a gesture has been</p>	<p>No construction necessary. Not governed by 35 U.S.C. § 112 ¶ 6</p> <p><u>Intrinsic Evidence:</u> Abstract; 1:4-11; 1:57-62; 2:66-3:11; 3:29-43; 3:53-60; 4:33-48; 5:24-29; 6:6-19; 6:63-7:19; 7:51-56; 7:64-8:24; 9:15-</p>	<p>Means-plus-function</p> <p><u>Function:</u> “detect a gesture has been performed in the electro-optical sensor field of view based on an output of the electro-optical sensor, and correlate the gesture detected by the sensor with an image capture function and subsequently capture an image using the digital camera, wherein the detected gesture is identified by the processing unit apart from a plurality of gestures”</p>

	<p>performed in the electro-optical sensor field of view based on an output of the electro-optical sensor, and correlate the gesture detected by the sensor with an image capture function and subsequently capture an image using the digital camera, wherein the detected gesture is identified by the processing unit apart from a plurality of gestures.”</p> <p>(Claim 13)</p>	<p>31; 10:5-21; 11:4-39; 11:49-67; 13:13-24; 13:65-14; Claim 13</p> <p>FIGS. 1, 2A-2D, 4, 6, 7, 8,</p> <p><u>Extrinsic Evidence:</u> See Expert Declaration of Benedict Occhiogrosso in Support of Plaintiff's Opening Claim Construction Brief served on July 16, 2021</p> <p>Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.</p>	<p>The dependent claims currently asserted by Plaintiff further add to the function, including: (1) determining a gesture that includes a hand motion (Claim 14)</p> <p><u>Structure:</u> Indefinite</p> <p><u>Intrinsic Evidence</u> '949 Patent at FIG. 2B; 6:6-19; Claim 1</p> <p>'949 Patent Prosecution History, including August 14, 2014 Applicant Arguments/Remarks Made in an Amendment at 8.</p> <p><u>Extrinsic Evidence</u> Expert testimony of Dr. Robert Louis Stevenson regarding what a person of ordinary skill in the art would understand the claim term to mean (which may include determining its recited function(s) and corresponding structure), based on the knowledge, experience, and understanding of a person of ordinary skill in the art, and upon reviewing the claims of the '949 Patent, in view of the claim language, the drawings, the written description, the specification of the '949 Patent as a whole, the file history of the '949 Patent, and the extrinsic evidence, and to respond to Plaintiff's claim construction positions and any testimony of Plaintiff's expert witnesses.</p>
9	<p>“adapted to”</p> <p>(Claims 1, 13)</p>	<p>No construction necessary.</p> <p><u>Intrinsic Evidence:</u> Abstract; 1:4-11; 1:50-62; 2:66-3:11; 3:29-43; 3:53-60; 4:33-48; 4:66-44; 6:6-19; 6:23-49; 6:63-7:19; 7:23-38; 7:51-56; 7:64-8:30; 8:64-9:14; 9:8-31; 10:5-30; 10:45-55; 11:4-39; 11:49-67; 12:28-13:30; 13:54-64; 14:25-27.</p>	<p>digital camera, sensor: “designed to”</p> <p>processor: “programmed to”</p> <p><u>Intrinsic Evidence</u> '949 Patent at FIG. 2B; 2:66-4:10, 4:66-5:9, 5:30-49, 6:6-29, 6:50-7:10, 8:5-9, 11:16-25, 12:64-13:5, 12:65-14:2; Claims 1, 13</p> <p>'949 Patent Prosecution History, including May 14, 2014 Final Rejection at 2</p>

		FIGS. 1- 8 Plaintiff reserves the right to provide additional evidence to rebut evidence proffered by Defendants.	
10	“electro-optical sensor” (Claims 1, 4, 6-8, 11-13)	No construction necessary.	“a sensor that senses light by measuring changes to an electric field” <u>Intrinsic Evidence</u> '949 Patent at Claims 1, 7 <u>Extrinsic Evidence</u> The IEEE Standard Dictionary of Electrical and Electronics Terms (Sixth Edition, 1997), including at 349 McGraw-Hill Dictionary of Scientific and Technical Terms (Fifth Edition, 1994) , including at 665-66